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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/631,412 | 08/03/2000 | Jeffrey Ronald King | IGB 1531 | 9598 |

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EXAMINER

SHOSHO, CALLIE E

ART UNIT PAPER NUMBER

1714

DATE MAILED: 06/23/2003

20

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/631,412

Applicant(s)

KING ET AL.

Examiner

Callie E. Shosho

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1714

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) 1-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 17, 19 and 21-30 is/are rejected.
- 7) ☐ Claim(s) 18, 20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

1. All outstanding rejections are overcome by applicants' amendment and 1.132 declaration filed 6/5/03.

Upon updating the searches, a new reference came to the attention of the examiner, namely, Ichinose et al. (U.S. 6,550,909) which was published after the mailing date of the last office action.

In light of the use of this new reference against the present claims, the finality of the previous office action has been withdrawn, and thus, the following action is non-final.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 26-29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

(a) Claims 26-28, which each ultimately depend on claim 17, each recite recites the limitation "said particulate polymer" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim given that claim 17 discloses ""polymeric particles". It is suggested that either (i) in each of claims 26-28, "said particulate polymer" is changed to "said polymeric particles" or (ii) in claim 17, "polymeric particles" is changed to "particulate polymer".

(b) Claim 29 recites an improper Markush group. It is suggested that "groups" is changed to "group" in line 2.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 17, 19, 21, 26, and 29 are rejected under 35 U.S.C. 102(e) as being anticipated by Ichinose et al. (U.S. 6,550,909).

Ichinose et al. disclose ink jet printing method comprising (i) printing onto a recording medium which comprises substrate coated with ink receiving layer, i.e. referred to as porous layer including inorganic pigment, and upper layer, i.e. referred to as porous layer including polymer particles, which comprises binder and polymeric particles such as polyethylene which have film-form temperature of 40-150 °C and (ii) heating the printed image to form protective coating wherein the printed image is retained in the upper layer. The printed image is formed by using aqueous inks and is heated by passing through a laminator (col.3, lines 60-65, col.4, lines 24-30, col.5, line 66-col.6, line 15, col.7, lines 16-22, 35-36, and 56-57, col.9, lines 5-26, col.10, lines 1-22, col.13, lines 30-32, col.14, lines 19-21, and col.22, lines 8-10).

In light of the above, it is clear that Ichinose et al. anticipate the present claims.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ichinose et al. (U.S. 6,550,909) in view of Shaw-Klein et al. (U.S. 6,147,139).

The disclosure with respect to Ichinose et al. in paragraph 5 above is incorporated here by reference.

The difference between Ichinose et al. and the present claimed invention is the requirement in the claims of using inert sheet during lamination.

Ichinose et al. disclose heating printed image by passing recording medium through laminator. However, there is no disclosure of using inert sheet when laminating as presently claimed.

Shaw-Klein et al., which is drawn to ink jet inks, disclose that after printing onto recording sheet, the printed image is heated by passing through a laminator wherein an inert sheet such as polyethylene film is in contact with the recording sheet when passed through the laminator in order to impart high gloss to the printed image (col.9, lines 3-28).

In light of the above, it therefore would have been obvious to one of ordinary skill in the art to use an inert sheet in lamination in the ink jet printing method of Ichinose et al. in order to produce printed image with high gloss, and thereby arrive at the claimed invention.

9. Claims 25 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ichinose et al. (U.S. 6,550,909) in view of Hirose et al. (U.S. 6,203,899).

The disclosure with respect to Ichinose et al. in paragraph 5 above is incorporated here by reference.

The difference between Ichinose et al. and the present claimed invention is the requirement in the claims of specific type of binder.

Ichinose et al. disclose the use of binder, however, there is no disclosure of specific types of binder.

Hirose et al., which is drawn to ink jet printing method, disclose using in the upper layer protective layer of recording medium binder including water soluble resin such as polyvinyl alcohol in order to produce printed image with good surface gloss (col.3, lines 40-45 and col.4, lines 40-65).

In light of the above, it therefore would have been obvious to one of ordinary skill in the art to use specific binder such as polyvinyl alcohol in the ink jet printing method of Ichinose et al. in order to produce printed image with good surface gloss, and thereby arrive at the claimed invention.

Allowable Subject Matter

10. Claims 18 and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 18 and 20 would be allowable if re-written in independent form given that the "closest" prior art Ichinose et al. (U.S. 6,550,909) does not disclose or suggest simultaneously coating the ink receiving layer and upper layer onto substrate or that the printed image is heated under pressure.

NOTE: Although claims 27-28 are rejected under 35 USC 112 (see paragraph 3 above), if applicants were to amend these claims to overcome the 35 USC 112 rejection of record, these claims would also be objected to as being dependent upon a rejected base claim but allowable if

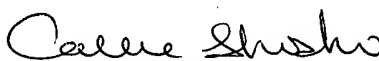
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re-written in independent form, given that Ichinose et al. disclose polymer particles which have average particle size of 0.1-5 μm which is outside the average diameter required in present claims 27 and 28.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Callie E. Shosho whose telephone number is 703-305-0208. The examiner can normally be reached on Monday-Friday (6:30-4:00) Alternate Fridays Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 703-306-2777. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.


Callie E. Shosho
Primary Examiner
Art Unit 1714

CS
June 19, 2003